

### **REMARKS/ARGUMENTS**

The claims are modified in this Preliminary Amendment, which is filed in conjunction with a Request for Continued Examination. Specifically, claims 1, 8, and 18 are amended. Therefore, claims 1-21 are still present for examination. Claims 1, 8, and 18 represent the independent claims. No new matter is added by these amendments. Applicants respectfully request reconsideration of this application as amended.

#### **Interview**

On July 19, 2005, Examiner Do granted an Interview after Final to discuss the rejections presented by the Office. Applicants especially appreciate this opportunity, as such interviews are discretionary. No specific agreement was sought nor was any agreement reached, as a variety possible amendments were discussed. However, the claims have been amended to address the concerns raised by the Examiner.

#### **35 U.S.C. §102/§103 Rejections, Lee et al. and Gross**

A Final Office Action, dated May 6, 2005, rejected claims 1-3 , 5, 8-11 and 15-20 under 35 U.S.C. §102(b) as being anticipated by the cited portions of U.S. Patent No. 5,883,824 to Lee et al. (hereinafter "Lee"). Further, the Office Action rejected claims 4, 6-7, 12-14 and 21 under 35 U.S.C. §103(a) as being obvious over Lee in view of the cited portions of U.S. Patent No. 6,512,523 to Gross (hereinafter "Gross"). Applicant submitted an Amendment after Final, filed June 24, 2005, advocating for allowance. In an Advisory Action mailed July 14, 2005, the Office found that the Amendment did not place the Application in condition for allowance.

The present invention contains limitations which do not exist in the cited portions of Lee or Gross relied on by the Office. Specifically, the references do not teach or suggest a rounding factor that indicates which of a *plurality of rounding algorithms* to be used. As this Amendment specifically sets forth, the plurality of rounding algorithms comprise, at least, first and second rounding algorithms which each may produce a change in the average. Support for the amendments is found in the Application (Original Application, page 8, lines 29-31). The

"rounding algorithms" in the present invention are clearly different than the cited portions Lee or Gross, and the following comments will clarify this distinction.

Independent claim 1 calls for an "instruction comprising a rounding factor (that) indicates which of a plurality of rounding algorithms to use in producing the average, the plurality of rounding algorithms comprising first (and second) rounding algorithm(s) which (each) **may produce a change in the average.**" Similar limitations are set forth in claims 8 and 18, the other independent claims.

In the Advisory Action dated July 14, 2005, the Office stated that Lee discloses a "the rounding factor either 1 or 0 at the least significant bit of the result for selecting the rounding algorithms" (Advisory Action, page 2; *see also* Final Office Action, May 6, 2005, page 3, section 6.). The Office further asserts that Gross also discloses "the rounding algorithms" (*Id.*, page 6, section 9.a.). Applicants respectfully disagree. The present amendments further clarify the meaning of "plurality of rounding algorithms," and serve to make this distinction more evident.

**1. Lee:** The cited portions of Lee (col. 6, line 35 - col. 7, line 10) disclose an embodiment wherein "round odd logic is used to prevent ... biasing" (Lee, col. 6, line 58). The system of this embodiment is "implemented by the addition of a single OR gate" (*Id.*, col. 7, lines 1-2). Rounding is performed in the intermediate steps, and the error is addressed using round odd logic. Applicant assumes that the Office believes that the OR gate comprises the rounding factor. Even assuming this to be true, the plurality of rounding algorithms in the present application do not exist in Lee. Lee states:

If the answer is exact before rounding, **no change is made**. A round off error occurs whenever a 1 is shifted off the result. This occurs when the least significant bit before shifting is a "1". In this case, the least significant bit of the result is set to a "1". If the bit shifted out is a "0", then the **result was exact** even after the shift, and the least significant bit of the result is **unaltered**. (*emphasis added, Id.*, col. 7, lines 60-67)

The plurality of rounding algorithms in the present application comprise at least first and second rounding algorithms which each **may produce a change in the average**. Even

assuming that the OR gate represents the rounding factor, if a bit shifted out is "0" the result is "unaltered."

**2. Gross:** The cited portions of Gross (Fig. 6) indicate that the Office believes that the fix\_up mask is a rounding algorithm. This Figure is addressed in the Detailed Description (Gross, col. 6, lines 3-14). The relevant provisions indicate:

fixup\_mask will be a '1' if stage 1 and stage 2 both contributed an error, and will be a '0' if either or both stages did not contribute an error. In block 507, fixup\_mask is subtracted from result to produce the final corrected answer . . . .  
(A) **result remains unchanged** (a '0' is subtracted) if no correction is needed.  
(*Id.*, col. 6, lines 10-17)

Thus, the fixup\_mask represents a quantity to be subtracted from an average, thereby producing a final corrected answer. The fixup\_mask quantity is based on the rounding performed in the intermediate steps. Gross does not teach or suggest an instruction that can pick the rounding algorithm as claimed. Even assuming that the fixup\_mask quantity represents the rounding factor, the result remains **unchanged** if the fixup\_mask is a '0.' Therefore, Gross does not have first and second rounding algorithms which each **may produce a change in the average**.

It is clear that neither Lee nor Gross teach a *rounding factor* that indicates which of a *plurality of rounding algorithms* to use. Specifically, the references do not teach first and second rounding algorithms which each may produce a change in the average. Claims 1, 8, and 18 are allowable for at least the foregoing reasons. Claims 2-7, 9-17, and 19-21 each recite limitations in addition to those in the independent claims, and these claims are believed allowable for at least the same reasons as given above.

### CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

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Amdt. dated August 3, 2005  
Preliminary Amendment

PATENT

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,



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